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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/824,856

04/14/2004

Patrick Dooling Bossman

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INTERNATIONAL BUSINESS MACHINES CORP.

IP LAW

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EXAMINER

L.E. THU NGUYETT

ART UNIT

PAPER NUMBER

2162

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/824,856

Applicant(s)

BOSSMAN ET AL.

Examiner

Thu-Nguyet Le

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 16 January 2007.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action has been issued in response to amendment file 11 September 2006. Claims 1-20 are pending. Accordingly, this action has been made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Osborn et al. (US 6,249,791).

With respect to claim 1, Osborn discloses a method of collecting statistics in a database management system comprising a plurality of collection objects, at least one collection object of the plurality of collection objects comprising at least one table, comprising:

receiving a workload comprising a plurality of database queries (column 12, lines 41-42, "a plurality of queries submitted to a database system");

identifying ("generating") query statistics for the database queries (column 12, lines 40-41, "generating a plurality of statistics for each of a plurality of queries");

consolidating ("storing") the query statistics ("generated statistic") for the database queries to provide consolidated statistics ("system stat table") (column 12, lines 43-44, and column 8, lines 8, 19-20).

generating at least one statistics collection task ("recommendations") based on the consolidated statistics ("system stat table") (column 9, lines 25-30, column 12, lines 45-47).

Claim 2 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Osborn teaches the method for collecting statistics wherein at least one statistics collection task is to collect database statistics associated with the at least one table of at the least one collection object of the plurality of collection objects (col.2 lines 50, 66-67, col.1 lines 29-30).

Claim 3 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Osborn teaches the method for collecting statistics wherein said generating generates one statistics collection task for each collection object of a subset of the plurality of collection objects based on the consolidated statistics (column 9, lines 25-30, column 12, lines 45-47).

Claim 4 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Osborn teaches the method for collecting statistics wherein the collection objects are table spaces (col.10 lines 65-67).

Claim 5 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Osborn teaches the method for collecting statistics wherein a particular collection object of the plurality of collection objects comprises a plurality of tables,

wherein said generating generates a particular statistic collection task to collect database statistic for the plurality of tables of the particular collection object (col.9 lines 25-33).

Claim 6 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Osborn teaches the method for collecting statistics wherein the plurality of collection objects comprise a plurality of tables, each table of the plurality of tables is associated with a table score (figure 4, blocks 114) based on, at least in part, a number of references to said each table by the queries of the workload (column 9, lines 65-66, "the frequency of which respective SQL queries are repeated"), further comprising:

determining a collection object score for each collection object of the plurality of collection objects based on, at least in part, the table score of at least one table of said each collection object to provide collection object scores (figure 4, block 114, 116), wherein said generating generates the statistics collection tasks ("summary table creation recommendations") for the collection objects ("summary tables") in accordance with the collection object scores (column 9, lines 64-66, "evaluating both CPU time required ... and the frequency of which respective SQL queries are repeated").

Claim 7 is rejected for the reasons set forth hereinabove for claim 6 and furthermore Osborn teaches the method for collecting statistics wherein the table score (figure 4, blocks 116) is also based on, at least in part, a cost of the queries referencing said each table (column 9, line 65, "CPU time").

Claim 8 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Osborn teaches the method for collecting statistics wherein the query

statistics ("generated query" in "system stat table") comprise column information (figure 4, column 8, lines 28-29, 32-33, "system stat table including a set of query statistic records" and "a record is created for each query", in block 102 "SQL Query", "EMP NAMES OF EMP DEPT 50" which includes employee name column and department number column), and when a column specified in the column information is part of an index, generating an index portion of the at least one statistics collection task to collect ("generates summary table creation recommendation") database statistics for that column ("summary tables") (column 12, lines 45, 48).

Claim 15 is for the reason discussed related to claim 7. Since claim 7 is substantially equivalent to claims 15.

Claim 16 is for the reason discussed related to claim 8. Since claim 8 is substantially equivalent to claims 16.

Claims 9-14 are rejected on grounds corresponding to the reasons given above for claims 1-6 and furthermore Osborn discloses the computer-readable media may be involved in providing one or more sequence of one or more instructions to the processor(s) for execution (column 5, lines 54-56).

Claims 17-20 are rejected on grounds corresponding to the reasons given above for claims 1-4 and furthermore Osborn discloses processor and memory which stores instructions (column 4, lines 55-57, 66).

Response to Arguments

4. The specification has been amended to overcome informalities. The claims have been amended to overcome claim objections and claim rejections. Therefore, specification objection, the claim objections and claim rejections have been removed.

5. Applicants' argument regarding the 102(b) rejection based upon Osborn has been considered and is not persuasive. The examiner respectfully traverses applicant's arguments.

With respect to applicants' argument that "the summary table creation recommendation of Osborn is different from the at least one statistics collection task of the claim invention". Applicants emphasized "statistics collection task refers to a task to ***collect statistics***". The examiner also reviewed carefully the detail description, "statistics collection tasks are ***suggestions***" ***can be executed***. It is RUNSTATS or DSTATS statement. In Osborn's reference, summary table recommendations (col.9 lines 29-30) is the collection of suggestions. These suggestions are in the form of queries (col.9 lines 31-32) so they can be executed. Therefore, the summary table recommendation of Osborn is statistics collection task of the claim invention.

With respect to applicants' argument that Osborn does not disclose "generating at least one statistic collection task to collect database statistic associated with the at least one table of the at least one collection object based on the consolidated statistic", the examiner respectfully disagree and refers applicants to the reasoning supra. Additionally, "summary tables in a database" (col.2 line 50) are created basing on the recommendations (col.2 lines 66-67). Therefore, the collect database statistic

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associated with the at least one table of the at least one collection object based on the consolidated statistics.

With respect to applicants' argument that "the summary table of Osborn is not a table space" is persuasive. However, Osborn discloses that "The DBMS allocates table space" for summary table (col.10 lines 65-68). In case more than one summary tables need to be created, the DBMS allocates more table spaces. In figure 2, collection of two tables: employee name and department name are table spaces for them.

With respect to applicants' argument that "create a summary table, not to collect database statistic for a plurality of tables", the examiner respectfully disagrees. The recommendations for creating summary tables are collect database statistic for a plurality of table. The examiner refers applicants to the explaining supra.

Accordingly, examiner strongly believes that a prima facie case has been clearly established with respect to the prior art rejection of the instant claims, given their broadest reasonable interpretation.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu-Nguyet Le whose telephone number is 571-270-1093. The examiner can normally be reached on 6:00-2:30.

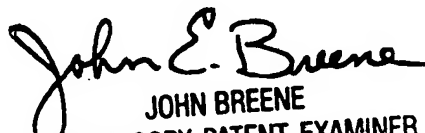
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on 571-272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TL

Thu-Nguyet Le
February 5, 2007

KBP


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